O.T. Avery

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Conversation with Dr. Avery about separation of virus from antibody

If the antibody is a globulin and the virus a nucleoprotein, as there is good reason to suppose, it might be possible to separate them by taking advantage of their differing solubilities and resistance to changes in pH. Heating will not help since globulin is not denatured until a temperature of 60°C. or more is reached. If the virus will stand 5 or 10 per cent sodium chloride, then it might be possible by using such solutions to separate it from antibody. There are papers by Heidelberger, written within the last two or three years, on the separation of antigen and antibody, these being the most recent papers of which Avery knows.

I suggested that it might be better to attempt the separation of antigen and antibody before they ever became combined, that is to say, by the use of living tumor tissue ground up in this solvent or that which might conceivably leave either antigen or antibody behind. Avery thought well of this possibility.

I spoke of the possible liberation of virus by an enzyme procured from the pneumococcus (N.B.—See Claude about this in relation to the paper given at the Cancer Congress.). Avery said that this pneumococcus would dissolve the polysaccharide found in the umbilical cord and certain other polysaccharides which are not ordinarily soluble. He said that there are papers by Dawson and Myer on the subject and that Dubos would know of it. He also remarked that the denaturation of immune globulin should be easy.